

Proposers

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Experience or training related to proposed project:

- Current graduate research project focuses on the impact on tree regeneration and control of *Ardisia crenata*.
- Attended a Florida Invasive Plant Identification workshop as part of the Florida Exotic Pest Plant Council 2008 Symposium.
- Site Leader for the Annual Great Air Potato Roundup in Gainesville, Florida.

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Experience or training related to proposed project:

- Current graduate research project focuses on control of *Lygodium japonicum*
- Previous experience removing invasive exotics with mechanical and chemical control methods in Southwest Florida and the Galapagos Islands as a member of volunteer teams
- Previous experience with hand removal of *Dioscorea bulbifera* in the Gainesville area as a volunteer with the Great Air Potato Roundup
- Attended a Florida Invasive Plant Identification workshop as part of the Florida Exotic Pest Plant Council 2008 Symposium

Sponsor

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Title of project

NATL without borders: a community approach for management of invasives

Project summary

To enhance previous and ongoing efforts to remove invasive exotic species at NATL, we will work with landowners within a 100 m buffer area surrounding NATL to assess and control for invasives on surrounding properties. We will also assess and control for these species on NATL land to remove any reinfestations that may have occurred. We will educate landowners about problematic invasive species, and will provide the labor to remove these species from their property as well as native plant material to replace the invasive species. By removing invasives from adjacent lands, we will reduce the likelihood of reinfestation within NATL. We will also generate a GIS map file indicating where invasives were found and treated within NATL and within the 100 m buffer area. This project will provide ecological and educational benefits, and the outreach component of the project provides an opportunity for positive exchange with neighboring landowners.

Starting date February 9, 2009

Completion date June 30, 2009

Description of project

One of the major challenges in managing invasive exotic species in natural areas is reinvasion, which necessitates multiple control treatments to eradicate the undesired species. In landscapes with multiple landowners within a small area (such as urban areas), treatment within a single property may be less effective due to the fact that treatment of adjacent properties does not occur. Therefore, an integrative and collaborative approach to management of invasive species in natural areas is necessary. The purpose of this project is to enhance previous efforts of problematic invasive species removal at NATL by treating and working with adjacent properties, which are potential sources of reinvasion. More specifically: a) treat populations of problematic invasive species that may have reinvaded NATL; b) remove problematic invasives from surrounding land to prevent reintroduction of these species to NATL, and c) provide education and outreach to neighboring landowners.

Methods

Invasive species treatments

We will use mechanical (plant materials will be bagged and properly disposed) and/or chemical (Roundup and Garlon availability through NATL) control methods to remove populations of four invasive exotic species from NATL: *Ardisia crenata* (coral ardisia), *Dioscorea bulbifera* (air potato), *Lygodium japonicum* (Japanese climbing fern) and *Paederia foetida* (skunk vine). These four species have been identified as problem exotics in NATL, especially within the hardwood hammock (<http://natl.ifas.ufl.edu/natlecos.htm>).

In addition, we will work with neighboring landowners to locate and remove seed/spore sources of these species using the methods described above. There are 28 indentified landowners within a 100m buffer of the NATL boundary, including University of Florida lands that are not part of NATL and could be potential threats of reinvasion (Appendix 1). We will contact each landowner, describe the purpose of our project, and request permission to assess the presence of the four invasive species on their property. If invasives are identified on the property we will

offer the landowner removal of the invasive, replacement of vegetation with native plant species, and will educate the landowner of the benefits of such activity.

If we are awarded the NATL minigrant, we will use the funds to purchase native plant material. By providing the plant material and the labor needed to remove the invasive species and replant with native species, we will give the landowners an additional incentive to allow us to complete the project work on their property.

We will use GPS to record the location of any invasive species found within and outside of NATL for any follow-up treatments.

We foresee multiple benefits from this project: A) removal of invasives within NATL improves the ecological functioning of the system and improves the aesthetic qualities of the property for visitors. B) Reduce the probability of reinfestation by removing populations of problematic invasives from outside the NATL border. C) A greater awareness of invasive species within the surrounding community and among potential users of NATL.

Deliverables for the project will include:

- A database of neighboring landowners including contact information; whether the property was assessed; which invasive species (if any) were located on the property; dates of removal/replacement; and the native species used to replace the invasive species.
- GIS map files indicating the location of the four problematic invasive species found and treated within and outside of NATL.
- An educative brochure for landowners that includes information on problematic invasive species and their impacts, as well as a list of alternative species native to the region that could be planted in place of the four invasive species. The brochure and list could also be provided at existing kiosks to educate NATL users.

Signatures

Student ____Gerardo Celis _____

Date _____

Student ____Corrie Pieteron_____

Date _____

Sponsor ____Shibu Jose_____

Date _____

Appendix 1.

